

Summary

Title: COMPOSITE POWDER CONTAINING CROSSLINKED POLYMER
Doc Id: JP 10-046037 A2
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US class:
International class: C08L 101/00 A; C08L 21/00 B; C08L 23/00 B
Issue date: 02/17/1998
Filing date: 07/30/1996

Abstract:

PROBLEM TO BE SOLVED: To obtain the subject powder capable of directly carrying out melt molding such as injection molding or extrusion molding and providing a molding having good performance by containing a crosslinked polymer in a thermoplastic resin.

SOLUTION: This composite powder comprises a crosslinked polymer and a thermoplastic resin. For example, crosslinked rubber, crosslinked polyolefin, etc., is exemplified as the crosslinked polymer. The crosslinked polymer is preferably pellet-like crude body having ≤5mm particle diameter. An inexpensive polyethylene or polypropylene having good processability is preferably used as the thermoplastic resin when recycle of crosslinked rubber, etc., of waste tire is aimed. The composite powder is obtained by charging a mixture of a crosslinked polymer coarse particles with thermoplastic resin pellet into a stone mill type kneading and extruding machine or a twin kneading and extruding machine and pulverizing the kneaded and extruded material by high shear force at a temperature lower by 10-50°C than the melting temperature of the thermoplastic resin. Blend amount of the crosslinked polymer is preferably 50-90wt.% Particle diameter of the powder is preferably ≤300μm.

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